

We Claim:

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- 5 1. In a network having a host electronic device and a plurality of storage devices with storage mediums, a method, comprising the steps of:
- providing a plurality of controllers interfaced with said network that control access to said storage devices; and
- providing a virtual interface on said host electronic device for interfacing between a user of said host electronic device and said plurality of storage devices,
- 10 with said virtual interface,
- receiving user data read requests and write requests from said user;
- translating said user data read requests and write requests into destination read requests and destination write requests in a manner that is transparent to
- 15 the user; and
- sending destination data read requests and write requests to at least one of said plurality of controllers for execution.
2. The method of claim 1 comprising the further steps of:
- 20 sending data from a user at said host electronic device to said virtual interface;
- sending data from said virtual interface to a controller for a selected one of said plurality of storage devices; and
- sending data from said controller to a selected one of said storage
- 25 mediums for storage on said selected storage medium.
3. The method of claim 2 wherein said user is a database.
4. The method of claim 2 wherein said user is a file system.

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5. In a network having a host electronic device and a plurality of storage devices with storage mediums, said storage mediums accessed via at least one of a plurality of controllers interfaced with said network, a method, comprising the steps of:
- providing a virtual interface on said host electronic device for interfacing
 - 5 between a user of said host electronic device and said plurality of storage devices, with said virtual interface,
 - receiving user data read requests and write requests from said user;
 - translating said user data read requests and write requests into
 - 10 destination read requests and destination write requests in a manner that is transparent to the user; and
 - sending destination data read requests and write requests to at least one of said plurality of controllers for execution;
 - 15 sending data from a user at said host electronic device to said virtual interface;
 - sending data from said virtual interface to a RAID (Redundant Array of Independent/Inexpensive Disk) volume controller for a RAID set; and
 - 20 sending data from said RAID volume controller to said RAID set.
6. The method of claim 5 wherein said RAID set includes a first side and a second side and wherein parity data is sent to the first side of said RAID set and a full copy of said data is sent to the second side of said RAID set by said RAID volume controller.
7. The method of claim 5 wherein a complete copy of said data is sent to the first side
- 25 and the second side of said RAID set.
8. The method of claim 5 wherein said data is striped among more than one disk of said RAID set.
9. The method of claim 5 wherein said RAID volume controller stores data on RAID sets with different RAID levels.
10. The method of claim 5 comprising the further step of:
- providing a plurality of RAID sets; and
 - 35 moving said data from a first RAID set to a second RAID set based on a command from said virtual interface.

11. The method of claim 5 wherein said RAID set includes a first side and a second side, comprising the further steps of:
- 5 attempting to access the data stored on said RAID set for said user;
 detecting an error in the first side of said RAID set; and
 providing said data from the second side of said RAID set to said user via said virtual interface and said RAID volume controller; and
 repairing said RAID set.
- 10 12. The method of claim 11 wherein said RAID volume controller copies said data to a different RAID set upon said error being detected.
13. An apparatus interfaced with a network, said network interfaced with a plurality of devices with storage mediums located thereon, said apparatus comprising:
- 15 a software facility for creating a virtual interface for receiving read and write requests for data from a user of said apparatus, said virtual interface sending read and write requests for said data to said devices with storage mediums located thereon; and
 a medium holding said software facility.
- 20 14. The apparatus of claim 13 further comprising:
 a file system located on said apparatus, said file system being the user of said host electronic device storing data via said software facility.
- 25 15. The apparatus of claim 13 further comprising:
 a database located on said apparatus, said database being the user of said host electronic device storing data via said software facility.
16. The apparatus of claim 13 wherein said software facility automatically stores said data on more than one of said storage mediums.
- 30 17. The apparatus of claim 13 wherein said software facility automatically copies said data to a different storage medium upon detecting a failure in one of the storage mediums holding said data.

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18. The apparatus of claim 13 wherein said software facility copies said data to a different storage medium in response to a request from a user of said electronic device.

19. In an electronic device interfaced with a network, said network interfaced with a plurality of devices with storage mediums located thereon, a medium holding computer-executable instructions for a method, said method comprising the steps of:

5 providing a software facility located on said electronic device, said software facility creating a virtual interface; and
allocating data transparently to said plurality of devices for storage using
10 said virtual interface.

20. The medium of claim 19 wherein said method comprises the further steps of:
detecting a failure in one of said plurality of devices holding said data;
and

15 automatically allocating a copy of said data to a different one of said plurality of devices for storage.

21. The medium of claim 19 wherein said method comprises the further step of:
allocating a copy of said data to a different one of said plurality of
20 devices for storage in response to a request from a user of said electronic device.

22. In a network, a method, comprising the steps of:
wrapping a network storage medium inside a virtual logical unit, said
virtual logical unit being a software created virtual interface encapsulating and hiding
25 the location of said network storage medium;
placing said virtual logical unit between said network storage medium
and an electronic device; and
accessing data on said network storage medium through data read
requests and data write requests sent from said electronic device to said virtual logical
30 unit.